DRAWINGS

Graphical representation of the distinction between using a vent to equalize pressure and my vent system which prevents a specific pressure difference from occurring (arbitrary values and units used)

Fig 1a

Use of vents to equalize pressure

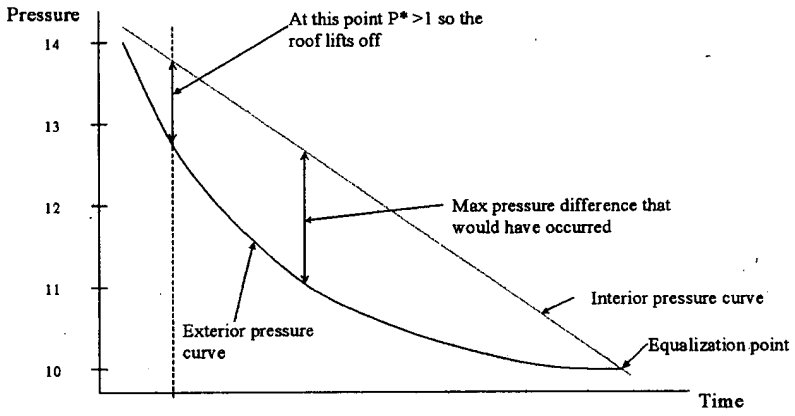


Fig1b

Use of vents to limit the pressure difference across a roof

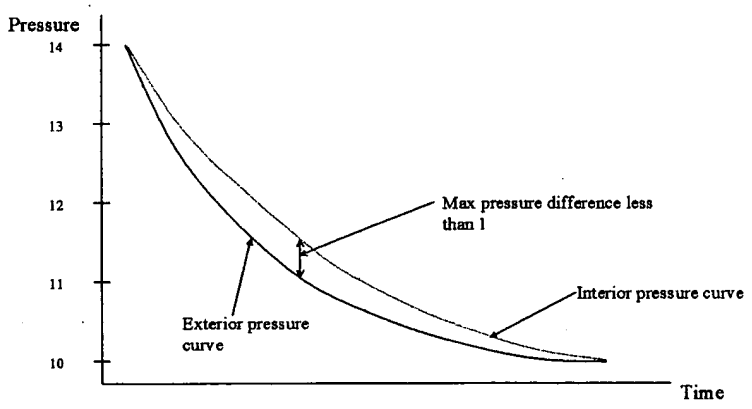


Fig 2

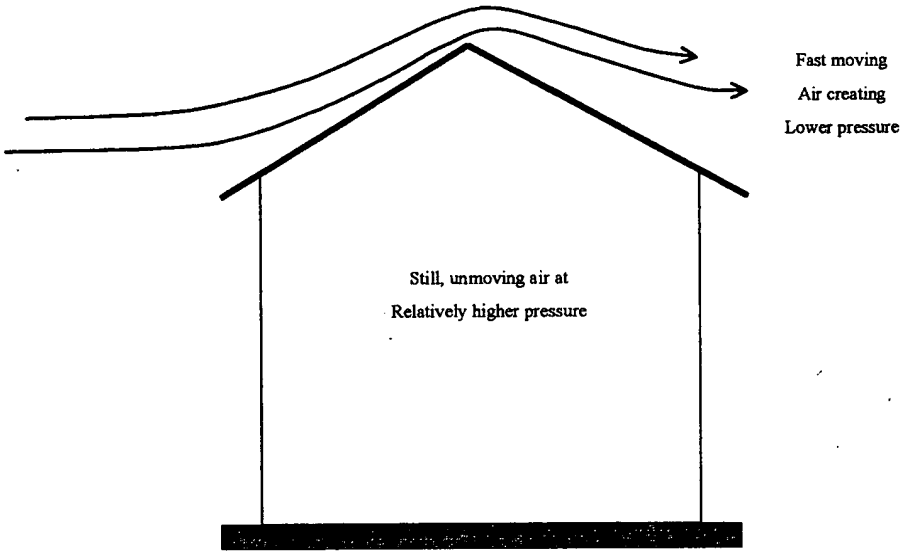


Fig 3

Forces Diagram

The weight of the walls and concrete pad can add to the effective roof weight depending upon the tensile strength of the connections (e.g. nails, screws, brackets, hurricane clips, roof beams)

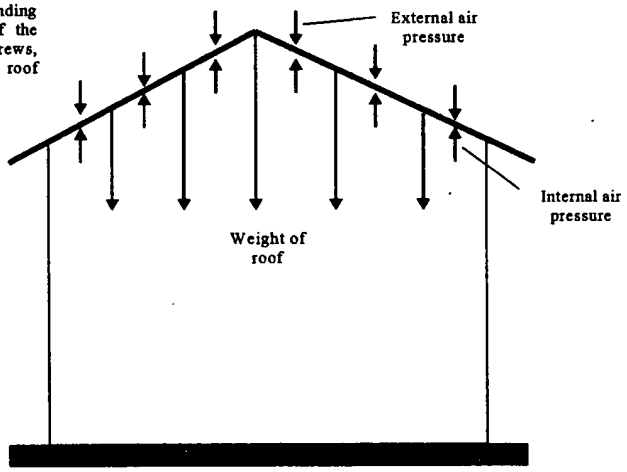


Fig 4a

1) Vent design (A)

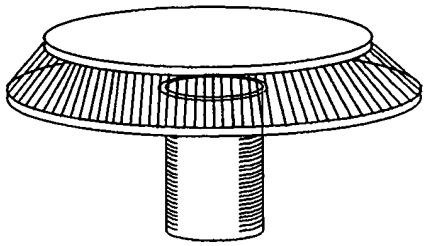


Fig 4b

Cross-sectional view

Plug in closed position

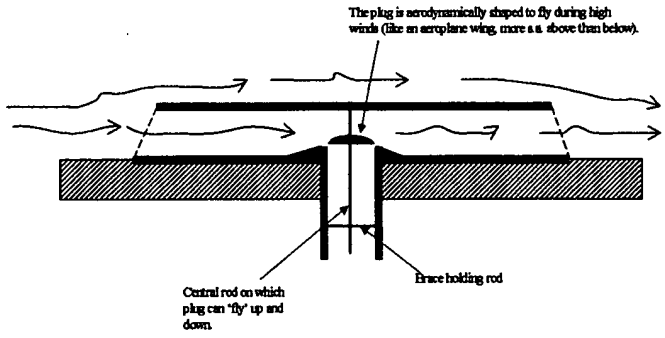


Fig 4c

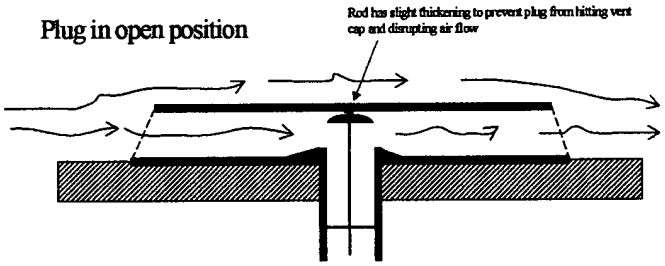


Fig 4d

Details of plug shaft and brace mechanism

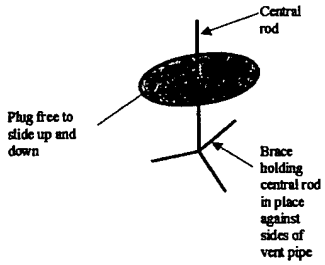


Fig 4e

View from above

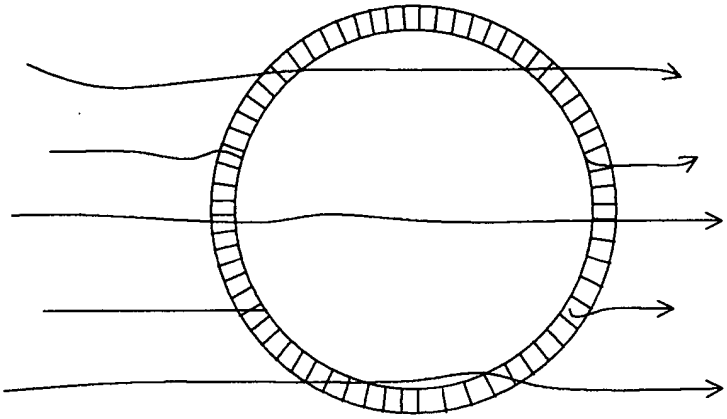


Fig 4f

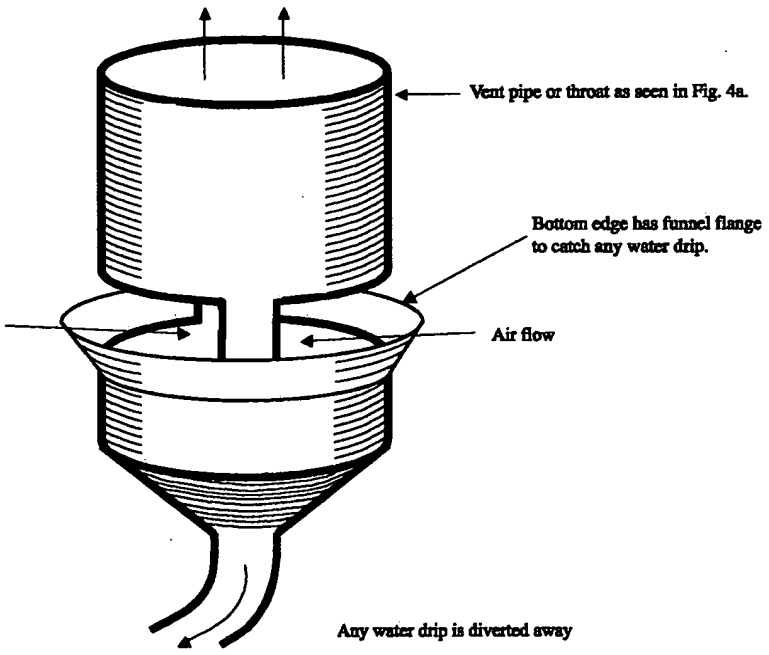
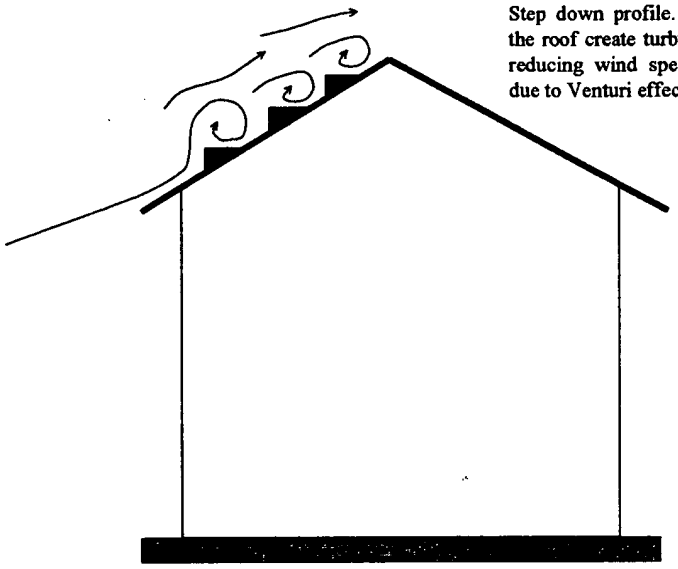


Fig 5



Step down profile. Blocks on the roof create turbulence thus reducing wind speed and lift due to Venturi effect

Fig 6a

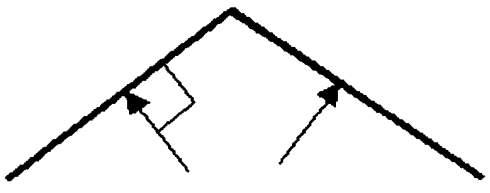


Fig 6b

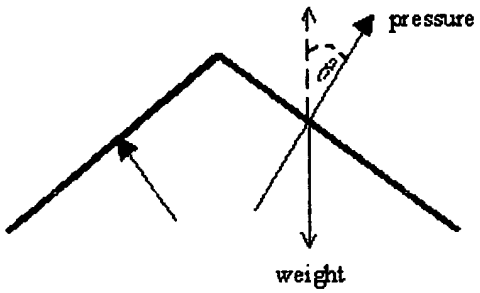


Fig 7

Demonstration Graph (straight line example) of Exterior and Interior Pressure Changes

(exterior pressure is from worst case scenario data)

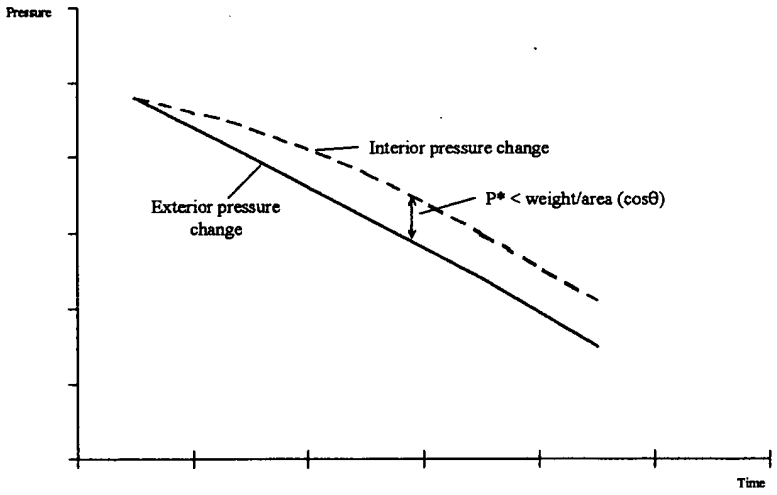


Fig 8

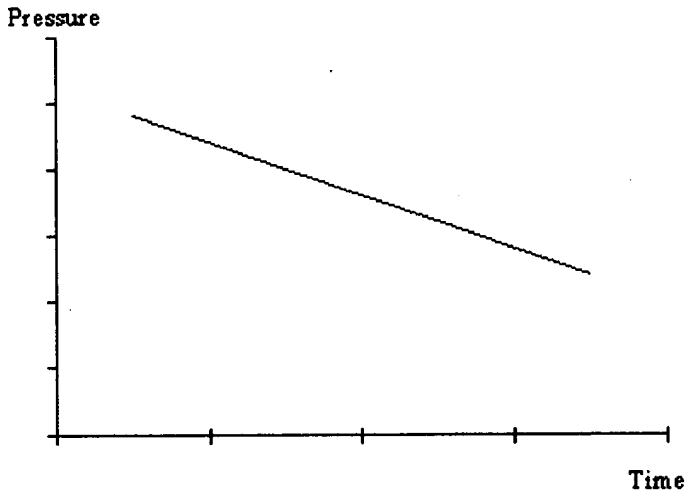

Pressure
Time

Fig 9

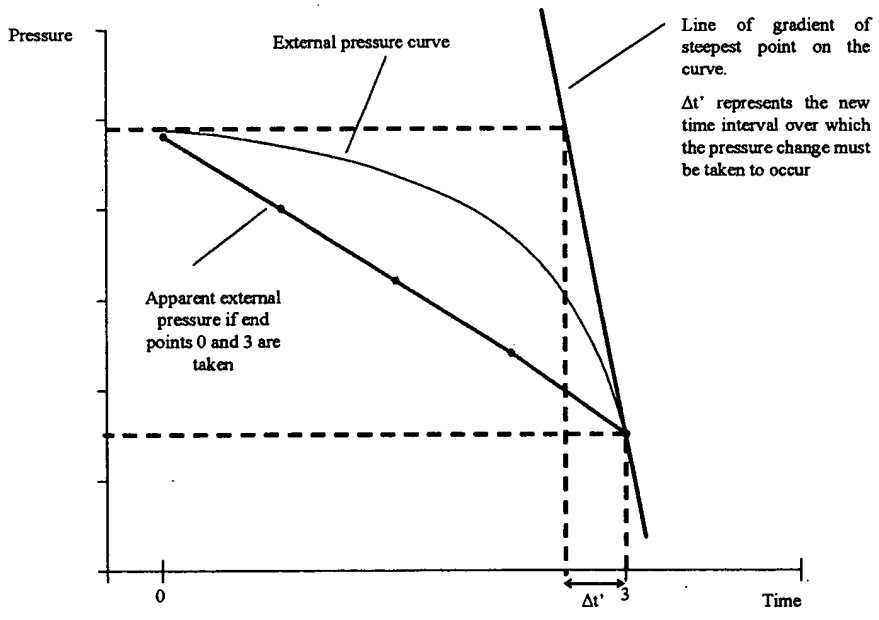

Pressure
External pressure curve
Line of gradient of steepest point on the curve.
Δt' represents the new time interval over which the pressure change must be taken to occur
Apparent external pressure if end points 0 and 3 are taken
0
Δt'
3
Time

Fig 10a

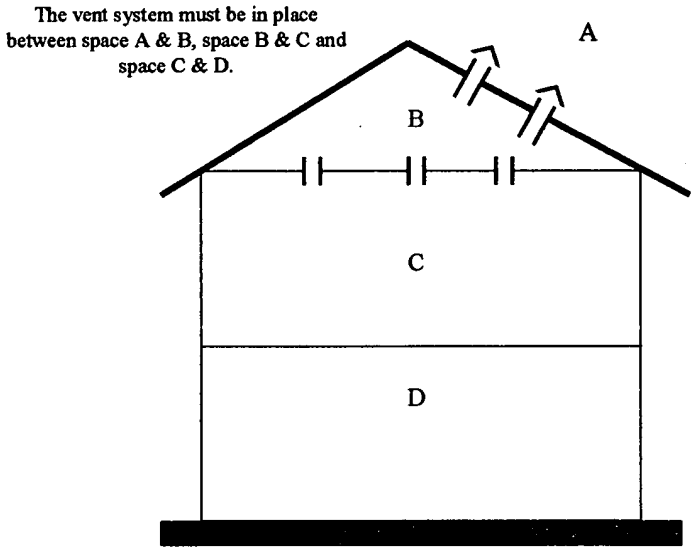


Fig10b

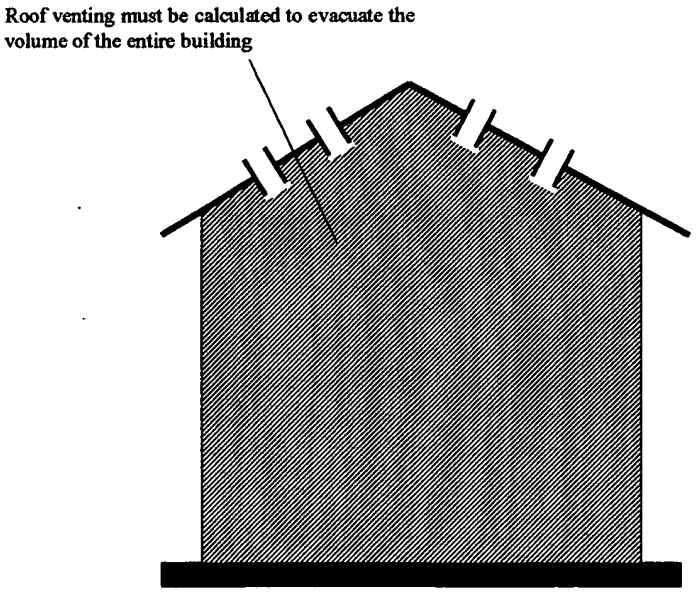


Fig 10c

Ceiling venting surface area must be calculated to evacuate the volume beneath it.

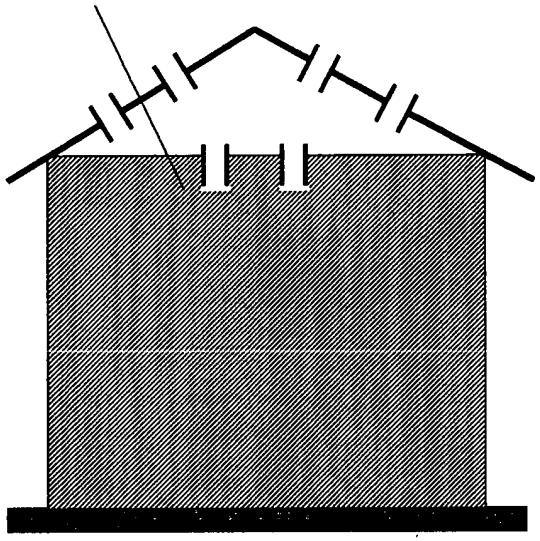


Fig 10d

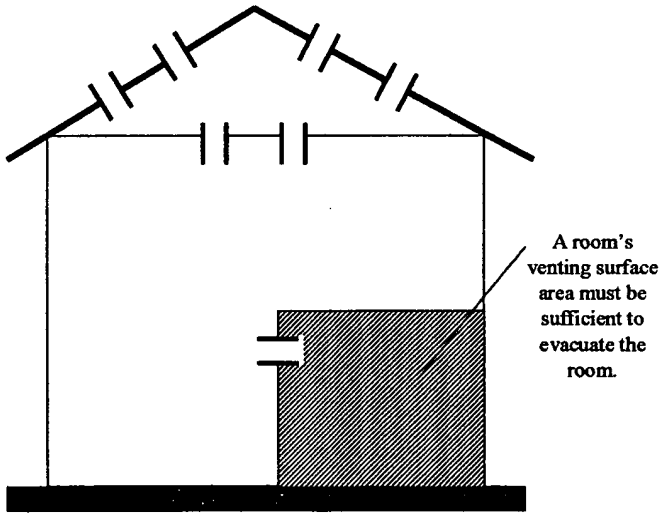


Fig 11

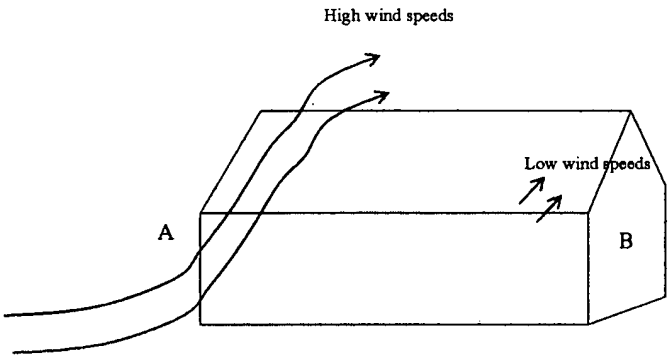


Fig 12

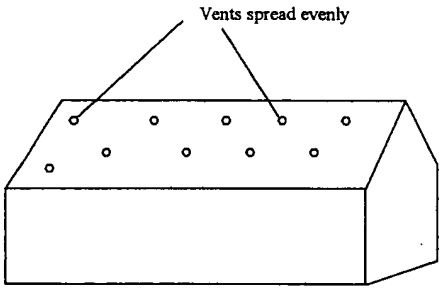


Fig 13